CLAIMS

1.   A complex filter comprising:

an I channel having a first I channel output and a second I channel output;

a Q channel having a first Q channel output and a second Q channel output;

wherein the second I channel output is input to the Q channel through a first passive network and wherein the second Q channel output is input to the I channel through a second passive network.

2.   A complex filter as recited in claim 1 wherein the first passive network and the second passive network are RC networks.

3.   A complex filter as recited in claim 1 wherein the second Q channel output is a low impedance output.

4.   A complex filter as recited in claim 1 wherein the second I channel output is a low impedance output.

5.   A complex filter as recited in claim 1 wherein the second Q channel output is at the output of an op amp.

6.   A complex filter as recited in claim 1 wherein the second I channel output is at the output of an op amp.

7.   A complex filter as recited in claim 1 wherein the second I channel output is input to the Q channel at an input of an op amp.

8.   A complex filter as recited in claim 1 wherein the second Q channel output is input to the I channel at an input of an op amp.

9.   A complex filter as recited in claim 1 wherein the complex filter is used for image rejection.

10.   A multiple feedback filter that includes two poles and a single op amp is implemented in the I and Q channels. A first linking network of capacitors and resistors links a Q channel output back to an I channel input and a second linking network of capacitors and resistors links an I channel output back to a Q channel input.

11.   A complex filter comprising:

an I channel having a first I channel output and a second I channel output;

a Q channel having a first Q channel output and a second Q channel output;

wherein the I channel includes a multiple pole filter having one op amp for every two poles.

12.   A complex filter as recited in claim 11 wherein the Q channel includes a multiple pole filter having one op amp for every two poles.

5   13.   A complex filter as recited in claim 11 wherein the complex filter is used for image rejection.

14.   A complex filter comprising:

an I channel having a first I channel output and a second I channel output;

a Q channel having a first Q channel output and a second Q channel output;

10   wherein the I channel includes a two pole filter having not more than a single op amp.

15.   A complex filter as recited in claim 14 wherein the Q channel includes a two pole filter having not more than a single op amp.

16.   A complex filter as recited in claim 14 wherein the complex filter is used for

15   image rejection.